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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/271,259	03/17/1999	TAKAFUMI NOGUCHI	2091-0189P	3867

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EXAMINER	
WHIPKEY, JASON T	
ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/271,259	NOGUCHI, TAKAFUMI	
	Examiner	Art Unit	
	Jason T. Whipkey	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5 and 13* is/are rejected.

7)☒ Claim(s) *2,4,6-12 and 14-24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 March 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/6/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Change of Examiner

1. The examiner of record for this application has been changed to Jason Whipkey. Any inquiry regarding this application should be directed to the new examiner. Current contact information is provided in the last section of this communication.

Response to Arguments

2. Applicant's arguments, see pages 17-18 of the remarks filed July 9, 2004, with respect to the rejection of claims 1-24 under 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of Lin.

3. This action is non-final because the claims are substantively unamended.

Claim Objections

4. Claims 2 and 3 are objected to because of the following informalities:

- On line 5 of claim 2, "components of the by weighting" is unintelligible.
- On line 11 of claim 3, "based the average brightness" is unintelligible.
- On line 12 of claim 3, "adjusted with on color" is unintelligible.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (U.S. Patent No. 6,522,432) in view of Eschbach (U.S. Patent No. 5,450,217) and further in view of Winkelman (U.S. Patent No. 5,668,890).

Regarding both **claims 1 and 3**, Lin discloses a system for adjusting image brightness, comprising:

> an adjuster (signal compensation circuit 110 in Figure 11) having an adjustment unit (digital processor 42) configured for effecting a computation on color image data represented by a color signal composed of at least three components ((R,G,B) signals; see column 4, lines 36-37) to obtain an average brightness of an image (Y2; see column 4, lines 45-47) and adjusting brightness of the image represented by the color image data (see column 4, lines 9-24), the system being characterized in that the adjustment unit is further configured for adjusting the brightness of the

image represented by the color image data based on the average brightness of the image (see column 4, lines 48-51).

Lin is silent with regard to adjusting the average brightness with color saturation components.

Eschbach discloses a method and apparatus correcting color saturation in an image, wherein:

the average brightness of the image is adjusted (see Figure 4 and column 7, lines 31-38, and the abstract, lines 7-11) with on color saturation components of the pixels (see Figure 3 and column 6, lines 53-56).

As stated in column 6, lines 14-42, an advantage to correcting saturation with luminance is that a higher image quality with less perceived image noise may be obtained. For this reason, it would have been obvious at the time of invention to have Lin's system adjust the average brightness with color saturation components.

Both Lin and Eschbach are silent with regard to obtaining and using pixel lightness components.

Winkelman teaches that a signal in RGB color space may be transformed in CIELAB color space (see column 6, lines 6-17). The CIELAB color space inherently includes lightness component L. As stated in column 6, lines 6-17, an advantage to converting a signal in RGB color space to CIELAB color space is that an intermediate, device-independent image may be produced, resulting in a higher-quality output. For this reason, it would have been obvious at the time of invention to have Lin's system convert the RGB input into CIELAB color space.

7. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin in view of Eschbach.

Regarding **claim 5**, Lin discloses a device for adjusting brightness of an image, comprising:

a data acquisition unit (CCD 22 in Figure 1) configured to acquire image data of the image (see column 4, lines 4-9); and

an adjustment unit (digital processor 42) configured to adjust a brightness of the image (see column 4, lines 9-24) based on an average brightness of the image (Y2; see column 4, lines 45-47).

Lin is silent with regard to adjusting the average brightness with color saturation components.

Eschbach discloses a method and apparatus correcting color saturation in an image, wherein:

the average brightness of the image is adjusted (see Figure 4 and column 7, lines 31-38, and the abstract, lines 7-11) with a color saturation of the image data from said data acquisition unit (see Figure 3 and column 6, lines 53-56).

As stated in column 6, lines 14-42, an advantage to correcting saturation with luminance is that a higher image quality with less perceived image noise may be obtained. For this reason, it would have been obvious at the time of invention to have Lin's system adjust the average brightness with color saturation components.

Regarding **claim 13**, Lin discloses a method for adjusting brightness of an image, comprising:

acquiring image data of the image (see column 4, lines 4-9); and

adjusting a brightness of the image (see column 4, lines 9-24) based on an average brightness of the image (Y2; see column 4, lines 45-47).

Lin is silent with regard to adjusting the average brightness with color saturation components.

Eschbach discloses a method and apparatus correcting color saturation in an image, wherein:

the average brightness of the image is adjusted (see Figure 4 and column 7, lines 31-38, and the abstract, lines 7-11) with a color saturation of the image data (see Figure 3 and column 6, lines 53-56).

As stated in column 6, lines 14-42, an advantage to correcting saturation with luminance is that a higher image quality with less perceived image noise may be obtained. For this reason, it would have been obvious at the time of invention to have Lin's system adjust the average brightness with color saturation components.

Allowable Subject Matter

8. Claims 2, 4, 6-12, and 14-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 2 and 4, no prior art could be located that teaches or fairly suggests a system/method for adjusting image brightness based on the average brightness of the image,

which is adjusted with color saturation components of the pixels using a computed mean of weighted lightness components.

Regarding claims 21-24, no prior art could be located that teaches or fairly suggests a system/method for adjusting image brightness based on the average brightness of the image, which is adjusted with color saturation components of the pixels by averaging color saturation values to obtain an average lightness value, designating the average lightness value as the average brightness of the image, and averaging and obtaining a variance of the color saturation components.

Regarding claims 6-12 and 14-20, no prior art could be located that teaches or fairly suggests a system/method for adjusting image brightness based on the average brightness of the image, which is adjusted with color saturation components of the pixels by computing lightness of the image data, computing color saturation of the image data, computing mean values of the lightness of the image data, and converting the brightness of the image data based on the mean values.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Whipkey, whose telephone number is (703) 305-1819 or

(571) 272-7321 beginning in late February 2005. The examiner can normally be reached Monday through Friday from 8:30 A.M. to 6:00 P.M. eastern standard time, alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached at (703) 305-4929. The fax phone number for the organization where this application is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JTW

JTW
January 26, 2005

WENDY R. GARBER
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